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Northern and Central California, Nevada, and Utah**

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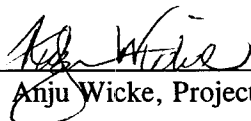
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**PHASE II RI/FS
INLAND AREA SITE 22, BUILDING 7SH5
NAVAL WEAPONS STATION CONCORD
CONCORD, CALIFORNIA**

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ABBREVIATIONS AND ACRONYMS

bgs	Below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-Term Environmental Action Navy
cm/sec	Centimeters per second
CTO	Contract task order
DNAPL	Dense nonaqueous phase liquid
DTSC	California Department of Toxic Substance Control
E&E	Ecology & Environment
EFA West	Engineering Field Activity West
EPA	U.S. Environmental Protection Agency
FS	Feasibility study
FWP	Field work plan
HLA	Harding Lawson Associates
HSA	Hollow stem auger
IAS	Initial assessment study
ID	Inside diameter
IT	International Technology Corporation
MCL	Maximum contaminant levels
mg/kg	Milligram per kilogram
msl	Mean sea level
NWS	Naval Weapons Station
OD	Outside diameter
PAH	Polynuclear aromatic hydrocarbons
PRC	PRC Environmental Management, Inc.
RCRA	Resource Conservation and Recovery Act
RFA	RCRA facility assessment
RI	Remedial investigation
RWQCB	California EPA Regional Water Quality Control Board
SI	Site investigation
SVOC	Semivolatile organic compound
SWMU	Solid waste management unit

ABBREVIATIONS AND ACRONYMS (Continued)

TBT	Tributyltin
TCA	Trichloroethane
TCE	Trichloroethene
TOG	Total oil and grease
TPH	Total petroleum hydrocarbons
TPH-d	TPH as diesel
TPH-mo	TPH as motor oil
UST	Underground storage tank
VOC	Volatile organic compound
$\mu\text{g/L}$	Micrograms per liter

1.0 PROJECT DESCRIPTION

Tetra Tech EM Inc. (TtEMI) formerly known as PRC Environmental Management, Inc. (PRC), received Contract Task Order (CTO) No. 0036 in 1995 from the Naval Facilities Engineering Command, Engineering Field Activity West (EFA West), under Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62474-94-D-7609 (CLEAN II). This CTO requested that TtEMI complete a Phase II remedial investigation (RI) and prepare a feasibility study (FS) report under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) for Inland Area Site 22 at Naval Weapons Station (NWS) Concord, Concord, California.

Based on the results presented in the Phase I RI, the Navy and regulatory agencies agreed to quarterly groundwater sampling at Site 22 to confirm the presence of contaminants found in Phase I RI sampling. The objectives of the Phase II RI sampling were to (1) confirm the presence of chlorinated hydrocarbons detected in grab groundwater samples during the Phase I RI, and (2) locate the contamination source if detections are confirmed. Phase II sampling was divided into three separate phases to best achieve the stated objectives. Only the first phase of the Phase II RI was completed and this technical memorandum discusses the findings of the investigation.

Section 2.0 of this technical memorandum provides site location and background information for Site 22. Section 3.0 describes previous investigations. Section 4.0 states the Phase II RI objectives. Section 5.0 discusses the field methodology. Section 6.0 discusses the site drainage, geology, and hydrogeology. Section 7.0 discusses the soil and groundwater analytical results. Section 8.0 presents the conclusions and recommendations of the site.

2.0 SITE LOCATION AND BACKGROUND

Site 22 is located along the southwestern portion of the Inland Area, at NWS Concord, as shown in Figure 1. The investigation of Site 22 includes an area that extends approximately 75 feet from the foundation of Building 7SH5, where an underground storage tank (UST) and associated piping, septic tank and drain line, various drains, and surrounding drainage ditches are located, as shown in Figure 2.

Building 7SH5 was built in 1944 as an inert storehouse on a concrete slab with no plumbing or heating (U.S. Department of the Navy [Navy] 1944). Four different operations have been conducted at this

building between 1944 and the present. Between 1944 and 1957, Building 7SH5 was used as an storehouse for inert equipment. In 1957, the building was converted to test missile components (Navy 1957). Testing included vibration and environment testing, which was the main function of the building until the early 1970s. In 1970, when maintenance operations began for the Guided Missile Division of the Ordnance Department (Ecology & Environment [E&E] 1983). During the maintenance operations phase, specific building activities included paint stripping, cleaning and painting missile wings and fins. These activities primarily used acetone, trichloroethane (TCA), methyl ethyl ketone, chloroethane, and several types of paint thinners (E&E 1983). Currently, the building is being used to manufacture mobile laboratories for use during explosive ordnance evaluation.

From 1970 to 1978, the Tidal Area Landfill reportedly received all wastes from Building 7SH5. After 1978, generated wastes have been disposed of off base (E&E 1983).

The following are potential areas of contamination identified during previous and current investigations.

Fuel Oil UST. A 1,000-gallon (45.5 inches in diameter by 12 feet long) steel UST for diesel storage was removed in January, 1997. The UST was installed in 1957 to supply fuel to three heaters that were added to the building (Navy 1957). Petroleum contamination in soil near the UST at Building 7SH5 was investigated when the UST was removed in 1997.

Concrete Sump. A concrete, sand filter box (sump), 3.5 feet long by 2 feet wide, is near the southwestern corner of Building 7SH5. The sump was used to filter paint from water discharged from the paint booth. The sump is currently empty, and the paint booth inside Building 7SH5 is not used.

Western Drain Line. A 1.25-inch galvanized steel drain line is located along the western wall of Building 7SH5 near the UST. The drain is currently not used and is plugged with grout from inside the building.

Septic System. An on-site sanitary sewer system at Building 7SH5 drains through a 4-inch vitrified clay pipe into a 500-gallon septic tank. The septic system currently receives wastes from the toilets and a service sink inside the building.

Northern Drain Line. A 1.5-inch galvanized steel drain line is the northern end of Building 7SH5 is currently not used. The specific purpose of the drain line is unknown, although it may have been used to drain condensate from air compressors inside the building.

3.0 PREVIOUS INVESTIGATIONS

The following sections describe previous investigations conducted near Building 7SH5. Previous investigations included a initial assessment study (IAS), a site investigation report, a UST investigation, a solid waste management unit (SWMU) investigation, and the Phase I RI/FS for the five Inland Area sites.

Initial Assessment Study. A visual site inspection was conducted by E&E during the IAS in 1983. During this time, specific activities at the building reportedly included paint stripping and cleaning and painting missile wings and fins. The cleaning and stripping operations used acetone, TCA, methyl ethyl ketone, chloroethane, and several types of paint thinners. Most of the paints used at the building were dispensed from spray cans. No visual environmental impact was noted during the inspection (E&E 1983), although there were allegations that waste paints, oil, and solvents had been spilled on the surrounding grounds or into a nearby drainage ditch. Subsequent interviews with several Missile Department personnel failed to substantiate these allegations, although one employee stated that until the late 1970s, waste disposal practices at the building were largely uncontrolled (E&E 1983).

After the IAS, Building 7SH5 was eliminated from consideration because of the small amount of wastes generated and because any large quantities of accumulated wastes would have been disposed of on-base at the Tidal Area Landfill (E&E 1983). According to the IAS, a 1980 hazardous waste inventory indicated the following quantities of wastes were generated annually at Building 7SH5: TCA (40 gallons per year), acetone (40 gallons per year), and methyl ethyl ketone (5 gallons per year) (E&E 1983). Because of changes in environmental laws since the IAS (CERCLA and the Superfund Amendments and Reauthorization Act), and the absence of records regarding disposal activities, this site was included in the Inland Area SI to evaluate whether activities at the building pose an environmental or health hazard under current regulations.

Site Investigation Field Work Plan. In June 1989, International Technology Corporation (ITC) prepared an RI field work plan (FWP) for Building 7SH5. The investigation and report was later

redesignated an SI, and the work was conducted by PRC in June 1992. The FWP states that small quantities of waste paint and solvents were poured on the ground from a paint stripping machine into a shallow gravel sump along the southeastern corner of the building. No environmental impact was visually noted during the inspection (IT 1989). The FWP also stated that small quantities of solvent and paint wastes were disposed of in a 24-inch deep earthen pit on the southwest corner of the building and that the pit has since been removed (IT 1989). The FWP does not provide information on how the pit location was identified.

Site Investigation Report. The SI at Site 22 was conducted by PRC in June 1992 and included the collection of soil samples from three soil borings within the suspected disposal, pit and collection and analysis of one composite surface soil sample from the bottom of the drainage ditch.

Soil borings were drilled to a depth of 4 feet within the alleged disposal pit. The top 2 feet of soil borings consisted of fill material including large, angular cobbles, and asphalt. Below the 2-foot depth, the formation varied from silty sand to gravelly clay. It is unknown whether the deeper material is additional fill or native material. The soil samples were analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), metals, tributyltin (TBT), total petroleum hydrocarbons (TPH)-purgeables, and TPH-extractables. Two soil samples were collected from each of the three soil borings within the backfilled trench at depths of about 2 and 4 feet below ground surface (bgs). A soil sample at the 3.5-foot depth contained TPH as diesel (TPH-d) at a concentration of 14.6 milligrams per kilograms (mg/kg). The soil sample at the 2-foot depth did not contain TPH-d.

Surface soil samples were also collected from the drainage ditch parallel and adjacent to Seventeenth Street. Soil samples from the ditch were composited into one sample in the laboratory and analyzed for VOCs, SVOCs, metals, TBT, TPH-purgeables, and TPH-extractables. The composite soil sample contained TPH-d at 9.23 mg/kg and toluene at 13 mg/kg.

UST Investigation. Harding Lawson Associates (HLA) conducted an investigation of the UST located west of Building 7SH5 in September 1993. A soil boring was drilled to a depth of 16.5 feet bgs and sampled at 4.5, 8, and 16 feet bgs. Soil sample results indicate that TPH-d was present in samples collected at 4.5 and 8 feet bgs at concentrations of 7,700 mg/kg and 1,600 mg/kg (HLA 1995).

The Subsurface Investigation and Tank Removal Plan, dated January 3, 1995, called for the removal of the UST, associated piping, and all contaminated soils until the results indicate residual hydrocarbon levels in soil below 100 mg/kg (HLA 1995). The UST was removed and the surrounding area investigated by NWS Concord in January 1997. Results of the removal showed that the UST was heavily rusted and contained one small hole. Staining was observed on the southern portion of the UST. The soil was over excavated to approximately 12 feet bgs to remove diesel-contaminated soil. No further investigations or actions are planned for the former UST site (K.T.W. & Associates, Inc, [KTW] 1998).

Resource Conservation and Recovery Act Facility Assessment. During the Resource Conservation and Recovery Act (RCRA) facility assessment (RFA) conducted by the Department of Toxic Substances Control (DTSC) in 1992, Building 7SH5 was designated as SWMU 52 because hazardous waste may have leached into soil from the building's septic tank system.

Two deep soil borings were advanced in the septic leach field, and two shallow soil borings were advanced along the drainage ditch west of the leach field in 1995 for the RFA. In addition, one liquid sample from the septic tank and a surface water sample from the drainage ditch were collected. All samples were analyzed for VOCs, SVOCs, total oil and grease (TOG), and metals.

Only one of the soil samples collected from the deep soil borings at a depth of 16 feet bgs contained TOG, at a concentration of 130 mg/kg. Both surface soil samples from the shallow soil borings contained TOG at concentrations of 83 and 280 mg/kg. One of two soil samples from the shallow soil borings collected at 2.5 feet bgs contained TOG at a concentration of 30 mg/kg. The water sample from the septic tank contained TOG at 11 micrograms per liter ($\mu\text{g/L}$) (PRC 1994).

Phase I Remedial Investigation/Feasibility Study. In 1995, three areas around Building 7SH5 were sampled as part of the Phase I RI/FS (PRC 1995e). These areas included the drainage ditches, the alleged disposal pit, and the UST and associated piping (Figure 3). The following description focuses on the TPH and VOC results, which are the constituents of concern for this site. The ambient metals concentrations data for Site 22 are discussed in the RI and in a technical memorandum.

Five soil samples were collected in the ditches around Building 7SH5 to evaluate whether any waste was disposed of in the ditches. Soil samples were located in the drainage ditches along the southern

and western sides of the site where storm water runoff collected. The Phase I RI work plan specified that surface soil samples be collected in the drainage ditch at the point where the site drains into the ditch, both upstream, and downstream of the site. However, the Phase I RI field sampling plan stated only that each drainage ditch sample would be obtained from areas where it appears that surface water may have collected. Therefore, no drainage ditch samples were collected upstream of the site. The soil samples were analyzed for SVOCs, TPH-extractables, and metals. Polynuclear aromatic hydrocarbons (PAH) were detected in two surface soil samples from the drainage ditch at concentrations up to 0.02 mg/kg. TPH-motor oil (TPH-mo) was detected in all five soil samples at concentrations ranging from 29 to 200 mg/kg. Only one of five surface soil samples contained TPH-mo above 100 mg/kg.

Nine shallow soil borings were advanced along the UST pipeline around the southern and western sides of Building 7SH5 to further define the extent and magnitude of soil contamination associated with the UST pipeline,. The shallow borings were located approximately 20 feet apart along the length of the UST pipeline. Each boring was drilled to about 4 feet bgs in order to reach below the pipeline depth, which varies from 1-foot bgs at the fill pipe to about 3 feet bgs at the UST. A total of nine soil samples was collected from the shallow borings and analyzed for VOCs, SVOCs, and TPH-extractables. TPH-d was detected at two locations at concentrations of 5,000 mg/kg and 370 mg/kg next to the fill pipe for the UST. No TPH-d was detected in the soil in borings located near the UST. TPH-mo was detected at five locations along the fill pipeline. The highest concentration of TPH-mo was detected at the fill pipe.

During the next phase of field work, three deep soil borings were drilled along the UST pipeline in areas where the maximum TPH concentrations were previously detected in samples from the shallow borings. Three soil samples were collected from each boring between 10 and 26 feet bgs. Also, a soil sample from each boring was collected at the upper groundwater zone and analyzed for total organic carbon (TOC) and geotechnical parameters. TPH-d was detected in one soil sample at a concentration of 500 mg/kg. TPH-mo was detected in one soil sample at a concentration of 11 mg/kg. SVOCs were not detected in any soil samples from the deep borings. Trichloroethene (TCE) was detected in samples from a boring near the fill pipe. TCE is the only VOC detected at the three boring locations.

Grab groundwater samples were collected from three borings and analyzed for VOCs, SVOCs, and TPH-extractables. The three groundwater samples contained TPH-mo at concentrations ranging from

630 to 380 µg/L. Two VOCs were also detected in groundwater. TCE was detected in a groundwater sample near the fill pipe at 27 µg/L, and TCA was detected in a groundwater sample at 1 µg/L and 2 µg/L. The maximum contaminant levels (MCL) for TCE and TCA are 5 µg/L and 200 µg/L, respectively [Regional Water Quality Control Board (RWQCB) 1995].

4.0 PHASE II REMEDIAL INVESTIGATION OBJECTIVES

Data from previous Site 22 sampling events indicate a TPH release to soil and groundwater near Building 7SH5. These releases are most likely from the UST and fill pipe near the building. Groundwater samples also contained TCA and TCE. TCE concentrations in groundwater exceed the MCL. Currently, the source of VOCs is not known but could be from past operations in the building.

The Phase II RI sampling objectives were to (1) confirm the presence of chlorinated hydrocarbons detected in grab groundwater samples collected during the Phase I RI, and (2) locate the contamination source once detections were confirmed. Sampling was also conducted to assess the extent of TPH contamination in groundwater.

During Phase II sampling, four monitoring wells were installed in January 1997, as shown in Figure 2, to confirm the presence of TPH and dissolved-phase TCE in the uppermost groundwater zone. According to U.S. Environmental Protection Agency (EPA) guidance (EPA 1994), the presence of dense, nonaqueous-phase liquids (DNAPL) should be investigated if TCE concentrations detected in groundwater approach 1,100 µg/L. The maximum concentration of TCE detected during the Phase I RI was 27 µg/L.

The locations and rationale for monitoring well placement were as follows:

- Monitoring well MW01 was placed near the drain line from the paint booth sump at the southwestern side of the building. Soil and groundwater samples will be used to evaluate whether contamination is present near the drain line and sump.
- Monitoring well MW02 was placed near the former UST on the western side of the building. Soil and groundwater samples will help assess the extent of TPH near the UST. The monitoring well was installed about 20 feet from the former UST.

- Monitoring well MW03 was placed on the northern side of the building near the septic system. Soil and groundwater samples will help assess whether contamination is present near the septic system.
- Monitoring well MW04 was placed near boring SB01 where TCE was found in the groundwater. Analyses of samples will confirm the presence of TCE in the groundwater.

Soil samples were analyzed for VOCs and TPH-extractables only. To characterize site lithology, the soil was continuously logged to the first aquitard, which was encountered at about 24 feet bgs.

Groundwater samples were collected from each well and analyzed for VOCs, SVOCs, and TPH-extractables. All monitoring wells were surveyed to measure the casing elevation. The groundwater flow direction for these wells was calculated from the water level readings.

According to the sampling plan, if groundwater samples contain TPH-mo greater than 500 µg/L or VOCs, a second phase of sampling would be conducted. The objectives of the second phase of sampling, if needed, would be to: (1) define the lateral extent of the TPH or TCE groundwater contamination; (2) identify the source of groundwater contamination; and (3) define the source and extent of the soil contamination.

5.0 FIELD METHODOLOGY

During monitoring well installation, soil borings were drilled using a hollow-stem auger (HSA) drill rig. Boring locations were cleared for underground utilities before drilling started. The boring locations are identified in Figure 2 as MW01, MW02, MW03, and MW04. This section discusses soil collection and sampling, monitoring well construction and development, groundwater sampling, and decontamination procedures.

5.1 SOIL COLLECTION AND SAMPLING

A 2-foot long by 2-inch inside-diameter (ID) split-spoon sampler was used to collect soil samples for chemical and lithologic analysis. The undisturbed soil samples were collected in 2-inch outside-diameter (OD), 6-inch long stainless steel sleeves. The stainless steel sleeves were cleaned prior to sampling with an alconox wash and a triple rinse. Teflon swatches and plastic caps were placed on the ends of the stainless steel sleeves after sampling.

The split-spoon sampler was driven ahead of the lead auger using a rig-mounted 140-pound hydraulic hammer. Blow counts were recorded for each 6-inch interval of the sampler. The hollow-stem augers were 3.75-inch ID and 8-inch OD.

Twenty-six soil samples were collected from the four soil borings. At locations MW01 and MW02, eight soil samples were collected from each location. The samples at location MW01 were collected at 1.5, 6, 11, 16, 21, 26, 31, and 36 feet bgs, and 2.5, 4.5, 7.5, 11.5, 16, 20.5, 26, and 31 feet bgs at MW02. At locations MW03 and MW04 five-soil samples were collected from each location. At location MW03 soil samples were collected at 1, 7, 13, 19, and 25 feet bgs, and at location MW04, soil samples were collected at 2.7, 11.5, 16.5, and 21.5 feet bgs. No visible signs of soil contamination were observed during the sampling of the borings

5.2 MONITORING WELL CONSTRUCTION

The four soil borings were converted into monitoring wells immediately after the soil boring was drilled. Before the monitoring well was installed, 3/8-inch Baroid Drilling, Wyoming bentonite chips were placed in the bottom of the bore hole. The bentonite chips was used to backfill the bottom of the boring that was not needed to install the monitoring well. The volume of the bentonite required to fill the borehole was computed and measured before it was poured. The monitoring wells were constructed of 2-inch diameter, flush-jointed, schedule 40 polyvinyl chloride (PVC) casing installed through the hollow stem auger. The bottom 10 feet of each monitoring well consisted of 0.010-inch (10 slot) screened casing and was plugged with a threaded end cap. The well screen was placed so that approximately 8 feet of the bottom of the screened section extended below the existing groundwater surface.

The annular space between the screened casing and the boring was backfilled with a clean number 2/12 RMC Lonestar monterey kiln-dried sand which was used as a filter pack. A 1- to 2-foot layer of sand was placed at the bottom of the monitoring wells. The filter pack was extended above the monitoring well screens for a distance of 2 to 3 feet. The filter pack was added directly between the casing and the auger. The monitoring wells were installed in the middle of the boring and no centralizers were needed.

A seal of bentonite chips 2 to 3 feet thick was placed above the filter pack in each of the wells. Distilled water was then added to the annular seal and hydrated for at least 45 minutes before the grout slurry was installed. The remaining annular space was then filled with a grout slurry consisting of potable water, Basalite Type I and II portland cement, and Aquagel bentonite powder. While removing the augers, a 5-foot "head" of slurry was maintained inside the augers to ensure that the slurry would release when lifting and to achieve a continuous slurry column. The bentonite slurry was then placed to approximately 2 feet of the ground surface. The grout was allowed to set for a minimum of 48 hours prior to finishing the well.

The wells were then completed with waterproof, traffic-rated, flush-mount protective boxes (Christy boxes). The finished well casings were completed so that the tops were almost level with the ground surface. The box was then set at least 2 inches above grade, and surrounded by a concrete apron to minimize entry of surface liquids.

5.3 MONITORING WELL DEVELOPMENT

Monitoring well development was initiated one week after well installation was completed. The wells were developed by mechanical surging and pumping of the groundwater.

Mechanical surging consisted of a surge block attached to a drill stem that forced water contained in the monitoring well into the surrounding aquifer. The initial surging action was relatively gentle, which allowed material blocking the screen to break up, go into suspension, and then move into the well. As the water began to move both into and out of the screen, the surge block was then lowered in increments to the bottom of the well. Development began at the top of the groundwater surface and moved progressively downward to prevent the surge block from becoming sand locked in the well. The surge block was raised and lowered inside the well casing below the groundwater surface for a minimum of 10 minutes.

Periodically during surging, a pump was used to remove dislodged sediment that accumulated at the bottom of the wells during the surging process. A minimum of five casing and filter pack volumes (well volumes) was removed during development. Temperature, pH, electrical conductivity, and turbidity were measured in the development water to assess development. These measurements were used as indicators of stability in the groundwater formation.

5.4 GROUNDWATER SAMPLING

The monitoring wells were sampled for four quarters in March, June, September, and December of 1997. Each of the wells were purged with a hand pump of at least three well volumes before the groundwater was sampled. The purge water was monitored for conductivity, pH, temperature, dissolved oxygen, and turbidity. Groundwater samples were collected immediately after the wells were purged. Samples from the groundwater monitoring wells were analyzed for VOCs, SVOCs, and TPH-extractables. All samples were placed inside precleaned, labeled bottles provided by the analytical laboratory.

5.5 DECONTAMINATION

Drilling and development equipment was steam-cleaned before work began and between borings. Decontamination wastewater was transferred to a poly-storage tank for off-site disposal. Sampling equipment was also decontaminated after collection of each sample. Sampling equipment included split spoons and stainless steel sleeves. An alconox cleaning solution was used for washing and a deionized (DI) water rinse was used for all sampling equipment, accessory drilling equipment, and tools.

6.0 SITE DRAINAGE, GEOLOGY, AND HYDROGEOLOGY

This section describes drainage around Site 22, the site soil geology, and the site hydrogeology.

Drainage. Building 7SH5 is on a low manmade rise that facilitates loading and unloading of rail cars from the buildings, northeastern side. Site drainage was designed to drain surface water from the building along Sixteenth Street by sloping the land southwest toward Seventeenth Street. Two drainage channels on the northwestern and southeastern sides of the building intercept the drainage along Sixteenth Street and run into drainage channels parallel to Seventeenth Street. The collected surface water remains within this channel, which is not connected to drainage channels northeast of Sixteenth Street and southwest of Seventeenth Street. This drainage channels design prevents surface water from reaching Seal Creek to the northeast (PRC 1997).

Geology. Site 22 is along the southern boundary of the Inland Area, within the alluvial slope of Los Medanos Hills, about 2,500 feet from the range front. The area is underlain by Quaternary young alluvium (Dibblee 1980 and 1981). Soil borings reveal that the site is generally underlain by clays,

silts, and intermittent sand and gravel lenses. The 0 to 20 feet bgs zone is generally composed of clays and silts with some gravel lenses about 10 feet bgs and range from 2 to 5 feet thick. The zone from 20 to 30 feet bgs is mostly clayey soil with some sand and small gravel lenses ranging from 1 to 6-inches thick. Groundwater was encountered from 22 to 30 feet bgs in borings. From 30 to 50 feet bgs, the site is predominately gravelly clays and silts.

Hydrogeology. Hydrogeologic information for Site 22 were collected during installation of monitoring wells MW01 through MW04, as shown in Figure 5. Groundwater was first encountered in these borings in sandy lenses at approximately 22 to 30 feet bgs. Groundwater in all four wells has fluctuated approximately 8 feet during the period from February to December of 1997. The highest groundwater levels during this period were in April and the lowest groundwater levels were found in December. Based on the static water levels, the elevation of the potentiometric surface beneath the site ranges in elevation from 134 to 142 feet above mean sea level (msl). The groundwater gradient ranged from 0.0032 to 0.0041 feet per foot in the direction of north 81 degrees west (N81W) to N87W (almost due west).

The vertical permeabilities of the upper water-bearing zone were assessed from geotechnical samples collected during borehole drilling in the Phase I RI. The vertical permeabilities calculated from these samples range from 1.00E-07 centimeters per second (cm/sec) to 9.00E-07 cm/sec.

7.0 ANALYTICAL RESULTS

This section discusses the soil and groundwater analytical results for the Phase II RI at Site 22.

7.1 SOIL ANALYTICAL RESULTS

Twenty-six soil samples were collected from monitoring wells during the Phase II RI. The soil samples were analyzed for VOCs and TPH-extractables. Soil analytical results and detection limits are presented in Appendix A. Figure 3 shows detected concentrations in soil.

VOCs. Four VOC compounds were detected in soil samples from borings MW02 and MW04. The four VOC compounds are bromodichloromethane, chloroform, chloromethane, and trichloroethene, which were detected from 1 to 3 mg/kg. Bromodichloromethane was detected in samples from boring MW02 at 20.5 feet bgs (1 mg/kg), 26 feet bgs (2 mg/kg), and 31 feet bgs (1 mg/kg); and in samples

from boring MW04 at 11.5 feet bgs (2 mg/kg) and 16.5 feet bgs (2 mg/kg). Chloroform was detected in samples from boring MW02 at 26 feet bgs (2 mg/kg). Chloromethane was detected in MW02 at 26 feet bgs (2 mg/kg) and MW04 at 7 feet bgs (2 mg/kg). Trichloroethene was detected in MW04 at 11.5 (3 mg/kg) and 16.5 feet bgs (2 mg/kg).

TPH-extractables. Motor oil is the only TPH-extractable compound that was detected from the soil samples. Soil samples from three of the four locations (MW01, MW02, and MW04) detected motor oil ranging from 6 to 15 mg/kg. Soil samples from MW01 detected motor oil at 6 (10 mg/kg) and 11 feet bgs (8 mg/kg). Soil samples from MW02, which is adjacent to the former UST, detected motor oil at 16 (14 mg/kg) and 20.5 feet bgs (15 mg/kg). Soil samples from MW04 detected motor oil only at 7 feet bgs (6 mg/kg).

7.2 GROUNDWATER ANALYTICAL RESULTS

The groundwater monitoring wells were sampled during four quarters in March, June, September, and December 1997. The groundwater monitoring wells were sampled and the samples analyzed for VOCs, SVOCs, and TPH-extractables. Only two VOC compounds (1,1,1-trichloroethane and trichloroethene) and one SVOC compound (bis(2-ethylhexyl)phthalate) were detected during the first two quarters of groundwater sampling. No TPH-extractables were detected in groundwater samples during the four quarters of sampling. The compound 1,1,1-trichloroethane was detected at MW03 in March at 1 µg/L. Trichloroethene was detected in samples from location MW04 collected in March and June at 3 and 1 µg/L. The only SVOC, bis(2-ethylhexyl)phthalate, was detected in June in samples collected at MW01 and MW02 at 24 and 32 µg/L. The results are summarized in Table 1.

Groundwater analytical results and detection limits are presented in Appendix B. Figure 4 shows concentrations detected in groundwater.

8.0 CONCLUSIONS AND RECOMMENDATIONS

As was stated in Section 4, if groundwater samples contained TPH-mo greater than 500 µg/L or VOCs, a second phase of sampling would be conducted. The results of the monitoring showed that TPH was not detected in any of the groundwater samples and that TCE was detected in only the first two quarters of sampling at levels below the MCL. In addition, 1,1,1-TCA was detected in the first quarter but at levels well below its MCL. The SVOC, bis(2-ethylhexyl)phthalate, which is considered a common

laboratory and field contaminant, was detected in samples from two wells in one quarter. Bis(2-ethylhexyl)phthalate was also detected in the laboratory blank.

In conclusion, quarterly groundwater sampling has adequately characterized groundwater at the site. The objective of the sampling was to confirm the presence and locate a source if any. Based on the results of monitoring, there is no evidence of a consistent detection of TCE that would indicate the presence of a contaminant plume or source. Therefore, no further groundwater sampling is recommended. Furthermore, low concentrations were detected in soil in the Phase II RI sampling. Further soil sampling is not recommended.

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TABLE 1
ANALYTICAL RESULTS FOR GROUNDWATER
SITE 22, CONCORD NWS

Monitoring Well	Analyte	Quarter 1 (3/97)	Quarter 2 (6/97)	Quarter 3 (9/97)	Quarter 4 (12/97)
MW01	Bis(2-ethylhexyl)phthalate	ND	24	ND	ND
MW02	Bis(2-ethylhexyl)phthalate	ND	32	ND	ND
MW03	1,1,1-trichloroethane	1	ND	ND	ND
MW04	Trichloroethene	3	1	ND	ND

Notes:

Groundwater results in micrograms per liter

ND Not detected

Analyses for groundwater included VOC's, SVOC's and TPH-extractables

Figures 1 - 4

These detailed station maps have been deleted from the Internet-accessible version of this document as per Department of the Navy Internet security regulations.

APPENDIX A
SITE 22, SOIL ANALYTICAL RESULTS

Appendix A

Site 22 - Building 7SH5

Soil Analytical Results

Point ID	7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW001		
Matrix	SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL		
Sample Date	01/29/97			01/29/97			01/29/97			01/29/97			01/29/97			01/29/97			01/29/97			01/29/97		
Sample Depth (in feet)	1.00 - 1.50			5.50 - 6.00			10.50 - 11.00			15.50 - 16.00			20.50 - 21.00			25.50 - 26.00			30.50 - 31.00			35.50 - 36.00		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Volatiles (in µg/Kg)																								
1,1,1-TRICHLOROETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,1,2,2-TETRACHLOROETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,1,2-TRICHLOROETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,1-DICHLOROETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,1-DICHLOROETHENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,2-DICHLOROETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,2-DICHLOROETHENE (TOTAL)	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,2-DICHLOROPROPANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
2-BUTANONE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
2-HEXANONE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
4-METHYL-2-PENTANONE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
ACETONE	ND	12	U	ND	12	U	ND	51	U	ND	15	U	ND	20	U	ND	38	U	ND	35	U	ND	39	U
BENZENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
BROMODICHLOROMETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
BROMOFORM	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
BROMOMETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CARBON DISULFIDE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CARBON TETRACHLORIDE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CHLOROBENZENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CHLOROETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CHLOROFORM	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CHLOROMETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CIS-1,3-DICHLOROPROPENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
DIBROMOCHLOROMETHANE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
ETHYLBENZENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
METHYLENE CHLORIDE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
STYRENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
TETRACHLOROETHENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
TOLUENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
TRANS-1,3-DICHLOROPROPENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
TRICHLOROETHENE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
VINYL CHLORIDE	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
XYLENE (TOTAL)	ND	12	U	ND	12	U	ND	10	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U

Notes: Detected concentrations are shaded.

µg/kg = Micrograms per kilogram, mg/kg = Milligrams per kilogram

ND; U = Not detected, J = Estimated value, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Δ = Low level SVOCs were only analyzed for 7SHSB026 and 7SHSB027; while all other samples were analyzed for the regular SVOC analyses.

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix A

Site 22 - Building 7SH5

Soil Analytical Results

Point ID	7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW001		
Matrix	SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL		
Sample Date	01/29/97			01/29/97			01/29/97			01/29/97			01/29/97			01/29/97			01/29/97			01/29/97		
Sample Depth (in feet)	1.00 - 1.50			5.50 - 6.00			10.50 - 11.00			15.50 - 16.00			20.50 - 21.00			25.50 - 26.00			30.50 - 31.00			35.50 - 36.00		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Petroleum Indicators(in mg/Kg)																								
DIESEL	ND	12	U	ND	12	U	ND	11	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
MOTOR OIL	ND	12	U	10	12	J	8	11	J	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
Percent Moisture (percent)																								
PERCENT MOISTURE	19.0			15.0			4.0			19.0			16.0			16.0			16.0			19.0		

Notes: Detected concentrations are shaded.

µg/kg = Micrograms per kilogram, mg/kg = Milligrams per kilogram

ND; U = Not detected, J = Estimated value, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Δ = Low level SVOCs were only analyzed for 7SHSB026 and 7SHSB027; while all other samples were analyzed for the regular SVOC analyses.

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

03/11/98

Appendix A

Site 22 - Building 7SH5

Soil Analytical Results

Point ID	7SHMW002			7SHMW002			7SHMW002			7SHMW002			7SHMW002			7SHMW002			7SHMW002			7SHMW002		
Matrix	SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL		
Sample Date	01/30/97			01/30/97			01/30/97			01/30/97			01/30/97			01/30/97			01/30/97			01/30/97		
Sample Depth (in feet)	2.00 - 2.50			4.00 - 4.50			7.00 - 7.50			11.00 - 11.50			15.50 - 16.00			20.00 - 20.50			25.50 - 26.00			30.50 - 31.00		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Volatiles (in µg/kg)																								
1,1,1-TRICHLOROETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,1,2,2-TETRACHLOROETHANE	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,1,2-TRICHLOROETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,1-DICHLOROETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,1-DICHLOROETHENE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,2-DICHLOROETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,2-DICHLOROETHENE (TOTAL)	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
1,2-DICHLOROPROPANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
2-BUTANONE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
2-HEXANONE	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
4-METHYL-2-PENTANONE	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
ACETONE	ND	15	U	ND	13	U	ND	20	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	12	U
BENZENE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
BROMODICHLOROMETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
BROMOFORM	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
BROMOMETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CARBON DISULFIDE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CARBON TETRACHLORIDE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CHLOROBENZENE	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CHLOROETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CHLOROFORM	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CHLOROMETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
CIS-1,3-DICHLOROPROPENE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
DIBROMOCHLOROMETHANE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
ETHYLBENZENE	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
METHYLENE CHLORIDE	ND	43	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
STYRENE	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
TETRACHLOROETHENE	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
TOLUENE	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
TRANS-1,3-DICHLOROPROPENE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
TRICHLOROETHENE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
VINYL CHLORIDE	ND	13	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
XYLENE (TOTAL)	ND	13	U	ND	13	U	ND	12	UJ	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U

Notes: Detected concentrations are shaded.

µg/kg = Micrograms per kilogram, mg/kg = Milligrams per kilogram

ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Δ = Low level SVOCs were only analyzed for 7SHSB026 and 7SHSB027; while all other samples were analyzed for the regular SVOC analyses.

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix A

Site 22 - Building 7SH5

Soil Analytical Results

Point ID	7SHMW002			7SHMW002			7SHMW002			7SHMW002			7SHMW002			7SHMW002			7SHMW002			7SHMW002		
Matrix	SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL		
Sample Date	01/30/97			01/30/97			01/30/97			01/30/97			01/30/97			01/30/97			01/30/97			01/30/97		
Sample Depth (in feet)	2.00 - 2.50			4.00 - 4.50			7.00 - 7.50			11.00 - 11.50			15.50 - 16.00			20.00 - 20.50			25.50 - 26.00			30.50 - 31.00		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Petroleum Indicators(in mg/Kg)																								
DIESEL	ND	13	U	ND	13	U	ND	12	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
MOTOR OIL	ND	13	U	ND	13	U	ND	12	U	ND	13	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U
Percent Moisture (percent)																								
PERCENT MOISTURE	NA			22.0			16.0			20.0			16.0			17.0			16.0			16.0		

Notes: Detected concentrations are shaded.

µg/kg = Micrograms per kilogram, mg/kg = Milligrams per kilogram

ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Δ = Low level SVOCs were only analyzed for 7SHSB026 and 7SHSB027; while all other samples were analyzed for the regular SVOC analyses.

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix A

Site 22 - Building 7SH5

Soil Analytical Results

Point ID	7SHMW003			7SHMW003			7SHMW003			7SHMW003			7SHMW003			7SHMW004			7SHMW004			7SHMW004		
Matrix	SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL		
Sample Date	01/27/97			01/27/97			01/27/97			01/27/97			01/27/97			02/03/97			02/03/97			02/03/97		
Sample Depth (in feet)	0.50 - 1.00			6.50 - 7.00			12.50 - 13.00			18.50 - 19.00			24.50 - 25.00			1.50 - 2.00			6.50 - 7.00			11.00 - 11.50		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Volatiles (in µg/kg)																								
1,1,1-TRICHLOROETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
1,1,2,2-TETRACHLOROETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	UJ	ND	13	U	ND	13	U
1,1,2-TRICHLOROETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
1,1-DICHLOROETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
1,1-DICHLOROETHENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
1,2-DICHLOROETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
1,2-DICHLOROETHENE (TOTAL)	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
1,2-DICHLOROPROPANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
2-BUTANONE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
2-HEXANONE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	UJ	ND	13	U	ND	13	U
4-METHYL-2-PENTANONE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
ACETONE	ND	12	U	ND	14	U	ND	16	U	ND	12	U	ND	18	U	ND	12	U	ND	19	U	ND	13	U
BENZENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	J
BROMODICHLOROMETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
BROMOFORM	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
BROMOMETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
CARBON DISULFIDE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
CARBON TETRACHLORIDE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	UJ	ND	13	U	ND	13	U
CHLOROBENZENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
CHLOROETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
CHLOROFORM	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	J	ND	13	U
CHLOROMETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
CIS-1,3-DICHLOROPROPENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
DIBROMOCHLOROMETHANE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
ETHYLBENZENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	UJ	ND	13	U	ND	13	U
METHYLENE CHLORIDE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	UJ	ND	13	U	ND	13	U
STYRENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	UJ	ND	13	U	ND	13	U
TETRACHLOROETHENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	UJ	ND	13	U	ND	13	U
TOLUENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
TRANS-1,3-DICHLOROPROPENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	J
TRICHLOROETHENE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
VINYL CHLORIDE	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
XYLENE (TOTAL)	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	UJ	ND	13	U	ND	13	U

Notes: Detected concentrations are shaded.

µg/kg = Micrograms per kilogram, mg/kg = Milligrams per kilogram

ND; U = Not detected, J = Estimated value, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Δ = Low level SVOCs were only analyzed for 7SHSB026 and 7SHSB027; while all other samples were analyzed for the regular SVOC analyses.

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix A

Site 22 - Building 7SH5

Soil Analytical Results

Point ID	7SHMW003			7SHMW003			7SHMW003			7SHMW003			7SHMW003			7SHMW004			7SHMW004			7SHMW004		
Matrix	SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL			SOIL		
Sample Date	01/27/97			01/27/97			01/27/97			01/27/97			01/27/97			02/03/97			02/03/97			02/03/97		
Sample Depth (in feet)	0.50 - 1.00			6.50 - 7.00			12.50 - 13.00			18.50 - 19.00			24.50 - 25.00			1.50 - 2.00			6.50 - 7.00			11.00 - 11.50		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Petroleum Indicators(in mg/Kg)																								
DIESEL	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	U	ND	13	U
MOTOR OIL	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	12	U	ND	13	J	ND	13	U
Percent Moisture (percent)																								
PERCENT MOISTURE	19.0			18.0			17.0			15.0			18.0			15.0			11.0			22.0		

Notes: Detected concentrations are shaded.

µg/kg = Micrograms per kilogram, mg/kg = Milligrams per kilogram

ND; U = Not detected, J = Estimated value, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Δ = Low level SVOCs were only analyzed for 7SHSB026 and 7SHSB027; while all other samples were analyzed for the regular SVOC analyses.

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix A

Site 22 - Building 7SH5

Soil Analytical Results

Point ID	7SHMW004			7SHMW004		
Matrix	SOIL			SOIL		
Sample Date	02/03/97			02/03/97		
Sample Depth (in feet)	16.00 - 16.50			21.00 - 21.50		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Volatiles (in µg/Kg)						
1,1,1-TRICHLOROETHANE	ND	13	U	ND	12	U
1,1,2,2-TETRACHLOROETHANE	ND	13	U	ND	12	U
1,1,2-TRICHLOROETHANE	ND	13	U	ND	12	U
1,1-DICHLOROETHANE	ND	13	U	ND	12	U
1,1-DICHLOROETHENE	ND	13	U	ND	12	U
1,2-DICHLOROETHANE	ND	13	U	ND	12	U
1,2-DICHLOROETHENE (TOTAL)	ND	13	U	ND	12	U
1,2-DICHLOROPROPANE	ND	13	U	ND	12	U
2-BUTANONE	ND	13	U	ND	12	U
2-HEXANONE	ND	13	U	ND	12	U
4-METHYL-2-PENTANONE	ND	13	U	ND	12	U
ACETONE	ND	13	U	ND	12	U
BENZENE	ND	13	U	ND	12	U
BROMODICHLOROMETHANE	2	13	J	ND	12	U
BROMOFORM	ND	13	U	ND	12	U
BROMOMETHANE	ND	13	U	ND	12	U
CARBON DISULFIDE	ND	13	U	ND	12	U
CARBON TETRACHLORIDE	ND	13	U	ND	12	U
CHLOROBENZENE	ND	13	U	ND	12	U
CHLOROETHANE	ND	13	U	ND	12	U
CHLOROFORM	ND	13	U	ND	12	U
CHLOROMETHANE	ND	13	U	ND	12	U
CIS-1,3-DICHLOROPROPENE	ND	13	U	ND	12	U
DIBROMOCHLOROMETHANE	ND	13	U	ND	12	U
ETHYLBENZENE	ND	13	U	ND	12	U
METHYLENE CHLORIDE	ND	14	U	ND	12	U
STYRENE	ND	13	U	ND	12	U
TETRACHLOROETHENE	ND	13	U	ND	12	U
TOLUENE	ND	13	U	ND	12	U
TRANS-1,3-DICHLOROPROPENE	ND	13	U	ND	12	U
TRICHLOROETHENE	2	13	J	ND	12	U
VINYL CHLORIDE	ND	13	U	ND	12	U
XYLENE (TOTAL)	ND	13	U	ND	12	U

Notes: Detected concentrations are shaded.

µg/kg = Micrograms per kilogram, mg/kg = Milligrams per kilogram

ND; U = Not detected, J = Estimated value, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Δ = Low level SVOCs were only analyzed for 7SHSB026 and 7SHSB027; while all other samples were analyzed for the regular SVOC analyses.

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix A

Site 22 - Building 7SH5

Soil Analytical Results

Point ID	7SHMW004			7SHMW004		
Matrix	SOIL			SOIL		
Sample Date	02/03/97			02/03/97		
Sample Depth (in feet)	16.00 - 16.50			21.00 - 21.50		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Petroleum Indicators(in mg/kg)						
DIESEL	ND	13	U	ND	12	U
MOTOR OIL	ND	13	U	ND	12	U
Percent Moisture (percent)						
PERCENT MOISTURE	21.0			15.0		

Notes: Detected concentrations are shaded.

µg/kg = Micrograms per kilogram, mg/kg = Milligrams per kilogram

ND; U = Not detected, J = Estimated value, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Δ = Low level SVOCs were only analyzed for 7SHSB026 and 7SHSB027; while all other samples were analyzed for the regular SVOC analyses.

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

03/11/98

APPENDIX B
SITE 22, GROUNDWATER ANALYTICAL RESULTS

Appendix B

Site 22 - Building 7SH5

Groundwater Analytical Results

Point ID	7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW002			7SHMW002			7SHMW002			7SHMW002		
Matrix	WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Sample Date	03/05/97			06/04/97			09/03/97			12/05/97			03/05/97			06/04/97			09/03/97			12/05/97		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Low Level Volatiles (in µg/L)																								
1,1,1-TRICHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,1,2,2-TETRACHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,1,2-TRICHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,1-DICHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,1-DICHLOROETHENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,2-DICHLOROETHANE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
1,2-DICHLOROETHENE (TOTAL)	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,2-DICHLOROPROPANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
2-BUTANONE	ND	5	UJ	NA			NA			NA			ND	5	UJ	NA			NA			NA		
2-HEXANONE	ND	5	U	NA			NA			NA			ND	5	U	NA			NA			NA		
4-METHYL-2-PENTANONE	ND	5	UJ	NA			NA			NA			ND	5	UJ	NA			NA			NA		
ACETONE	ND	5	UJ	NA			NA			NA			ND	5	UJ	NA			NA			NA		
BENZENE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
BROMODICHLOROMETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
BROMOFORM	ND	1	UJ	NA			NA			NA			ND	1	UJ	NA			NA			NA		
BROMOMETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CARBON DISULFIDE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CARBON TETRACHLORIDE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
CHLOROBENZENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CHLOROFORM	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CHLOROMETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CIS-1,3-DICHLOROPROPENE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
DIBROMOCHLOROMETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
ETHYLBENZENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
METHYLENE CHLORIDE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
STYRENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
TETRACHLOROETHENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
TOLUENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
TRANS-1,3-DICHLOROPROPENE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
TRICHLOROETHENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
VINYL CHLORIDE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
XYLENE (TOTAL)	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
Volatiles (in µg/L)																								
1,1,1-TRICHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U

Notes: Detected concentrations are shaded.

µg/L = Micrograms per liter, mg/L = Milligrams per liter

ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix B

Site 22 - Building 7SH5

Groundwater Analytical Results

Point ID	7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW002			7SHMW002			7SHMW002			7SHMW002		
Matrix	WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Sample Date	03/05/97			06/04/97			09/03/97			12/05/97			03/05/97			06/04/97			09/03/97			12/05/97		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Volatiles (in µg/L)																								
1,1,2,2-TETRACHLOROETHANE	NA			ND	10	U	ND	10	UJ	ND	10	U	NA			ND	10	U	ND	10	UJ	ND	10	U
1,1,2-TRICHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
1,1-DICHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
1,1-DICHLOROETHENE	NA			ND	10	U	ND	10	UJ	ND	10	U	NA			ND	10	U	ND	10	UJ	ND	10	U
1,2-DICHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
1,2-DICHLOROETHENE (TOTAL)	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
1,2-DICHLOROPROPANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	UJ	ND	10	UJ
2-BUTANONE	NA			ND	10	U	ND	10	UJ	ND	10	UJ	NA			ND	10	U	ND	10	UJ	ND	10	UJ
2-HEXANONE	NA			ND	10	U	ND	10	UJ	ND	10	UJ	NA			ND	10	U	ND	10	UJ	ND	10	UJ
4-METHYL-2-PENTANONE	NA			ND	10	UJ	ND	10	UJ	ND	10	UJ	NA			ND	10	UJ	ND	10	UJ	ND	10	UJ
ACETONE	NA			ND	10	U	ND	10	UJ	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
BENZENE	NA			ND	10	U	ND	10	UJ	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
BROMODICHLOROMETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
BROMOFORM	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
BROMOMETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CARBON DISULFIDE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CARBON TETRACHLORIDE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CHLOROBENZENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CHLOROFORM	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CHLOROMETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CIS-1,3-DICHLOROPROPENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
DIBROMOCHLOROMETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
ETHYLBENZENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
METHYLENE CHLORIDE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
STYRENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
TETRACHLOROETHENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
TOLUENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
TRANS-1,3-DICHLOROPROPENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
TRICHLOROETHENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
VINYL CHLORIDE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
XYLENE (TOTAL)	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
Semivolatiles (in µg/L)																								
1,2,4-TRICHLOROBENZENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
1,2-DICHLOROBENZENE	ND	5	U	ND	5	U	ND	5	U	ND	10	U	ND	5	U	ND	5	U	ND	5	U	ND	10	U
1,3-DICHLOROBENZENE	ND	5	U	ND	5	U	ND	5	U	ND	10	U	ND	5	U	ND	5	U	ND	5	U	ND	10	U
1,4-DICHLOROBENZENE	ND	5	U	ND	5	U	ND	5	U	ND	10	U	ND	5	U	ND	5	U	ND	5	U	ND	10	U

Notes: Detected concentrations are shaded.

µg/L = Micrograms per liter, mg/L = Milligrams per liter

ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix B

Site 22 - Building 7SH5

Groundwater Analytical Results

Point ID	7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW002			7SHMW002			7SHMW002			7SHMW002		
Matrix	WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Sample Date	03/05/97			06/04/97			09/03/97			12/05/97			03/05/97			06/04/97			09/03/97			12/05/97		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Semivolatiles (in µg/L)																								
2,2'-OXYBIS (1-CHLOROPROPANE)	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,4,5-TRICHLOROPHENOL	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	26	U	ND	25	U
2,4,6-TRICHLOROPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,4-DICHLOROPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,4-DIMETHYLPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,4-DINITROPHENOL	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	26	U	ND	25	U
2,4-DINITROTOLUENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,6-DINITROTOLUENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-CHLORONAPHTHALENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-CHLOROPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-METHYLNAPHTHALENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-METHYLPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-NITROANILINE	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	26	U	ND	25	U
2-NITROPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
3,3'-DICHLOROBENZIDINE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
3-NITROANILINE	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	26	U	ND	25	U
4,6-DINITRO-2-METHYLPHENOL	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	26	U	ND	25	U
4-BROMOPHENYL-PHENYLETHER	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-CHLORO-3-METHYLPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-CHLOROANILINE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-CHLOROPHENYL-PHENYLETHER	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-METHYLPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-NITROANILINE	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	26	U	ND	25	U
4-NITROPHENOL	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	26	U	ND	25	U
ACENAPHTHENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
ACENAPHTHYLENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
ANTHRACENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (A) ANTHRACENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (A) PYRENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (B) FLUORANTHENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (G, H, I) PERYLENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (K) FLUORANTHENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BIS (2-CHLOROETHOXY) METHANE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BIS (2-CHLOROETHYL) ETHER	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BIS (2-ETHYLHEXYL) PHTHALATE	ND	5	U	ND	4	U	ND	13	UJ	ND	10	UJ	ND	13	U	ND	4	U	ND	9	UJ	ND	10	UJ
BUTYLBENZYLPHTHALATE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U

Notes: Detected concentrations are shaded.

µg/L = Micrograms per liter, mg/L = Milligrams per liter

ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix B

Site 22 - Building 7SH5

Groundwater Analytical Results

Point ID	7SHMW001			7SHMW001			7SHMW001			7SHMW001			7SHMW002			7SHMW002			7SHMW002			7SHMW002		
Matrix	WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Sample Date	03/05/97			06/04/97			09/03/97			12/05/97			03/05/97			06/04/97			09/03/97			12/05/97		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Semivolatiles (in µg/L)																								
CARBAZOLE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
CHRYSENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DI-N-BUTYLPHTHALATE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DI-N-OCTYLPHTHALATE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DIBENZ (A, H) ANTHRACENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DIBENZOFURAN	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DIETHYLPHTHALATE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DIMETHYLPHTHALATE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
FLUORANTHENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
FLUORENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
HEXACHLOROBENZENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
HEXACHLOROBUTADIENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
HEXACHLOROCYCLOPENTADIENE	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U
HEXACHLOROETHANE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
INDENO (1, 2, 3- CD) PYRENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
ISOPHORONE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
N-NITROSO-DI-N-PROPYLAMINE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
N-NITROSODIPHENYLAMINE	ND	10	U	ND	10	U	NA			NA			ND	10	U	ND	10	U	NA			NA		
N-NITROSODIPHENYLAMINE (1)	NA			NA			ND	10	U	ND	10	U	NA			NA			ND	10	U	ND	10	U
NAPHTHALENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
NITROBENZENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
PENTACHLOROPHENOL	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U	ND	26	U	ND	25	U
PHENANTHRENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
PHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
PYRENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
TOTAL PAHS	ND			ND			ND			ND			ND			ND			ND			ND		
Petroleum Indicators (in mg/L)																								
DIESEL	ND	0.1	U	NA			NA			NA			ND	0.1	U	NA			NA			NA		
DIESEL FUEL	NA			ND	0.1	U	ND	0.1	UJ	ND	0.1	U	NA			ND	0.1	U	ND			ND	0.1	U
MOTOR OIL	ND	0.1	U	ND	0.5	U	ND	0.5	U	ND	0.5	U	ND	0.1	U	ND	0.5	U	ND			ND	0.5	U

Notes: Detected concentrations are shaded.

µg/L = Micrograms per liter, mg/L = Milligrams per liter

ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix B

Site 22 - Building 7SH5

Groundwater Analytical Results

Point ID	7SHMW003			7SHMW003			7SHMW003			7SHMW003			7SHMW004			7SHMW004			7SHMW004			7SHMW004		
Matrix	WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Sample Date	03/05/97			06/04/97			09/03/97			12/05/97			03/05/97			06/04/97			09/03/97			12/05/97		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Low Level Volatiles (in µg/L)																								
1,1,1-TRICHLOROETHANE	1	1		NA			NA			NA			ND	1	U	NA			NA			NA		
1,1,2,2-TETRACHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,1,2-TRICHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,1-DICHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,1-DICHLOROETHENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,2-DICHLOROETHANE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
1,2-DICHLOROETHENE (TOTAL)	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
1,2-DICHLOROPROPANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
2-BUTANONE	ND	5	UJ	NA			NA			NA			ND	5	UJ	NA			NA			NA		
2-HEXANONE	ND	5	U	NA			NA			NA			ND	5	U	NA			NA			NA		
4-METHYL-2-PENTANONE	ND	5	UJ	NA			NA			NA			ND	5	UJ	NA			NA			NA		
ACETONE	ND	5	UJ	NA			NA			NA			ND	5	UJ	NA			NA			NA		
BENZENE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
BROMODICHLOROMETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
BROMOFORM	ND	1	UJ	NA			NA			NA			ND	1	UJ	NA			NA			NA		
BROMOMETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CARBON DISULFIDE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CARBON TETRACHLORIDE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
CHLOROBENZENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CHLOROETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CHLOROFORM	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CHLOROMETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
CIS-1,3-DICHLOROPROPENE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
DIBROMOCHLOROMETHANE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
ETHYLBENZENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
METHYLENE CHLORIDE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
STYRENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
TETRACHLOROETHENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
TOLUENE	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
TRANS-1,3-DICHLOROPROPENE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
TRICHLOROETHENE	ND	1	U	NA			NA			NA			3	1		NA			NA			NA		
VINYL CHLORIDE	ND	0.5	U	NA			NA			NA			ND	0.5	U	NA			NA			NA		
XYLENE (TOTAL)	ND	1	U	NA			NA			NA			ND	1	U	NA			NA			NA		
Volatiles (in µg/L)																								
1,1,1-TRICHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U

Notes: Detected concentrations are shaded.
µg/L = Micrograms per liter, mg/L = Milligrams per liter
ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier
Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.
Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix B

Site 22 - Building 7SH5

Groundwater Analytical Results

Point ID	7SHMW003			7SHMW003			7SHMW003			7SHMW003			7SHMW004			7SHMW004			7SHMW004			7SHMW004		
Matrix	WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Sample Date	03/05/97			06/04/97			09/03/97			12/05/97			03/05/97			06/04/97			09/03/97			12/05/97		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Volatiles (in µg/L)																								
1,1,2,2-TETRACHLOROETHANE	NA			ND	10	U	ND	10	UJ	ND	10	U	NA			ND	10	U	ND	10	UJ	ND	10	U
1,1,2-TRICHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
1,1-DICHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
1,1-DICHLOROETHENE	NA			ND	10	U	ND	10	UJ	ND	10	U	NA			ND	10	U	ND	10	UJ	ND	10	U
1,2-DICHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
1,2-DICHLOROETHENE (TOTAL)	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
1,2-DICHLOROPROPANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
2-BUTANONE	NA			ND	10	U	ND	10	UJ	ND	10	UJ	NA			ND	10	U	ND	10	UJ	ND	10	UJ
2-HEXANONE	NA			ND	10	U	ND	10	UJ	ND	10	UJ	NA			ND	10	U	ND	10	UJ	ND	10	UJ
4-METHYL-2-PENTANONE	NA			ND	10	U	ND	10	UJ	ND	10	U	NA			ND	10	U	ND	10	UJ	ND	10	U
ACETONE	NA			ND	10	UJ	ND	10	UJ	ND	10	UJ	NA			ND	10	UJ	ND	10	UJ	ND	10	UJ
BENZENE	NA			ND	10	U	ND	10	UJ	ND	10	U	NA			ND	10	U	ND	10	UJ	ND	10	U
BROMODICHLOROMETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
BROMOFORM	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
BROMOMETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CARBON DISULFIDE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CARBON TETRACHLORIDE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CHLOROBENZENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CHLOROETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CHLOROFORM	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CHLOROMETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
CIS-1,3-DICHLOROPROPENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
DIBROMOCHLOROMETHANE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
ETHYLBENZENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
METHYLENE CHLORIDE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
STYRENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
TETRACHLOROETHENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
TOLUENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
TRANS-1,3-DICHLOROPROPENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
TRICHLOROETHENE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	J	ND	10	U	ND	10	U
VINYL CHLORIDE	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
XYLENE (TOTAL)	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U
Semivolatiles (in µg/L)																								
1,2,4-TRICHLOROBENZENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
1,2-DICHLOROBENZENE	ND	5	U	ND	5	U	ND	5	U	ND	10	U	ND	5	U	ND	5	U	ND	5	U	ND	10	U
1,3-DICHLOROBENZENE	ND	5	U	ND	5	U	ND	5	U	ND	10	U	ND	5	U	ND	5	U	ND	5	U	ND	10	U
1,4-DICHLOROBENZENE	ND	5	U	ND	5	U	ND	5	U	ND	10	U	ND	5	U	ND	5	U	ND	5	U	ND	10	U

Notes: Detected concentrations are shaded.

µg/L = Micrograms per liter, mg/L = Milligrams per liter

ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

Inorganic results less than 10 are reported to two significant figures and results greater than 10 are reported to three significant figures.

Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix B

Site 22 - Building 7SH5

Groundwater Analytical Results

Point ID	7SHMW003			7SHMW003			7SHMW003			7SHMW003			7SHMW004			7SHMW004			7SHMW004			7SHMW004		
Matrix	WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Sample Date	03/05/97			06/04/97			09/03/97			12/05/97			03/05/97			06/04/97			09/03/97			12/05/97		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Semivolatiles (in µg/L)																								
2,2'-OXYBIS (1-CHLOROPROPANE)	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,4,5-TRICHLOROPHENOL	ND	25	U	ND	25	U	ND	26	U	ND	26	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U
2,4,6-TRICHLOROPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,4-DICHLOROPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,4-DIMETHYLPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,4-DINITROPHENOL	ND	25	U	ND	25	U	ND	26	U	ND	26	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U
2,4-DINITROTOLUENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2,6-DINITROTOLUENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-CHLORONAPHTHALENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-CHLOROPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-METHYLNAPHTHALENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-METHYLPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
2-NITROANILINE	ND	25	U	ND	25	U	ND	26	U	ND	26	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U
2-NITROPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
3,3'-DICHLOROBENZIDINE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
3-NITROANILINE	ND	25	U	ND	25	U	ND	26	U	ND	26	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U
4,6-DINITRO-2-METHYLPHENOL	ND	25	U	ND	25	U	ND	26	U	ND	26	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U
4-BROMOPHENYL-PHENYLETHER	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-CHLORO-3-METHYLPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-CHLOROANILINE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-CHLOROPHENYL-PHENYLETHER	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-METHYLPHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
4-NITROANILINE	ND	25	U	ND	25	U	ND	26	U	ND	26	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U
4-NITROPHENOL	ND	25	U	ND	25	U	ND	26	U	ND	26	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U
ACENAPHTHENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
ACENAPHTHYLENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
ANTHRACENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (A) ANTHRACENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (A) PYRENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (B) FLUORANTHENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (G, H, I) PERYLENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BENZO (K) FLUORANTHENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BIS (2-CHLOROETHOXY) METHANE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BIS (2-CHLOROETHYL) ETHER	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
BIS (2-ETHYLHEXYL) PHTHALATE	ND	16	U	ND	6	UJ	ND	4	UJ	ND	13	UJ	ND	4	U	ND	4	UJ	ND	6	UJ	ND	41	UJ
BUTYLBENZYLPHTHALATE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U

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ND; U = Not detected, J = Estimated value, NA = Not analyzed, Det. Lim. = Detection Limit, Qual. = Validation Qualifier

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Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.

Appendix B

Site 22 - Building 7SH5

Groundwater Analytical Results

Point ID	7SHMW003			7SHMW003			7SHMW003			7SHMW003			7SHMW004			7SHMW004			7SHMW004			7SHMW004		
Matrix	WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
Sample Date	03/05/97			06/04/97			09/03/97			12/05/97			03/05/97			06/04/97			09/03/97			12/05/97		
	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.	Result	Det. Lim.	Qual.
Semivolatiles (in µg/L)																								
CARBAZOLE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
CHRYSENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DI-N-BUTYLPHthalate	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DI-N-OCTYLPHthalate	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DIBENZ (A, H) ANTHRACENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DIBENZOFURAN	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DIETHYLPHthalate	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
DIMETHYLPHthalate	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
FLUORANTHENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
FLUORENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
HEXACHLORO BENZENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
HEXACHLORO BUTADIENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
HEXACHLOROCYCLOPENTADIENE	ND	10	U	ND	10	U	NA			ND	10	U	ND	10	U	ND	10	U	NA			ND	10	U
HEXACHLOROETHANE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
INDENO (1,2,3-CD) PYRENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
ISOPHORONE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
N-NITROSO-DI-N-PROPYLAMINE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
N-NITROSODIPHENYLAMINE	ND	10	U	ND	10	U	NA			NA	10	U	ND	10	U	ND	10	U	NA			NA	10	U
N-NITROSODIPHENYLAMINE (1)	NA			NA			ND	10	U	ND	10	U	NA	10	U	NA	10	U	ND	10	U	ND	10	U
NAPHTHALENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
NITROBENZENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	10	U
PENTACHLOROPHENOL	ND	25	U	ND	25	U	ND	26	U	ND	26	U	ND	25	U	ND	25	U	ND	25	U	ND	25	U
PHENANTHRENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	25	U	ND	10	U	ND	10	U	ND	10	U
PHENOL	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	25	U	ND	10	U	ND	10	U	ND	10	U
PYRENE	ND	10	U	ND	10	U	ND	10	U	ND	10	U	ND	25	U	ND	10	U	ND	10	U	ND	10	U
TOTAL PAHS	ND		U	ND		U	ND		U	ND		U	ND		U	ND		U	ND		U	ND		U
Petroleum Indicators (in mg/L)																								
DIESEL	ND	0.1	U	NA			NA			NA			ND	0.1	U	NA			NA			NA		
DIESEL FUEL	NA			ND	0.1	U	ND	0.1	UJ	ND	0.1	U	NA			ND	0.1	U	ND	0.1	UJ	ND	0.1	U
MOTOR OIL	ND	0.1	U	ND	0.5	U	ND	0.5	U	ND	0.5	U	ND	0.1	U	ND	0.5	U	ND	0.5	U	ND	0.5	U

Notes: Detected concentrations are shaded.

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Organic results less than 10 are reported to one significant figure and results greater than 10 are reported to two significant figures.